



THE IMPLEMENTATION OF PROBLEM-BASED LEARNING ACTIVITY THROUGH ONLINE SCHOOL FIELD PRACTICE

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ABSTRACT

The application of problem-based learning is a style of methodology that puts the idea of learning from facts and looking at real-world problems into practice. In order to examine mediated communication, this study used a qualitative ex-experimental design using qualitative techniques. This method, known as the "qualitative experiment," makes use of in-depth interviews and focus groups under randomized stimulus circumstances that are commonly found in experimental research. In this work, observational data collecting and document analysis were the primary methods of data acquisition. This study intends to examine how problem-based learning is used in online English learning activities. Highlights from the approach's implementation initiatives include; 1) The concept grasp of the student regarding the subject matter; and 2) the student's critical thinking. These findings suggest that the qualities of the Problem-Based Learning approach, namely the student's independence and social competency, had emerged.

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INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves and society. The goal of national education is to educate the life of the nation and develop the Indonesian people as a whole, namely, people who believe in and are devoted to God Almighty and have a noble character, have knowledge and skills, are physically and spiritually healthy, have a strong and independent personality and have a sense of social responsibility and nationality (Sisdiknas, 2003).

Based on Law on the National Education System No 44/2015 concerning the National Standards for Higher Education, graduate competency standards are the minimum criteria regarding the knowledge, attitudes, and skills outlined in the creation of learning outcomes that constitute the qualifications of graduates' abilities. The requirement is, of course, that the learning process in higher education must be able to enhance students' aptitude, and it is carried out through the use of planned and methodical learning

constructions. In accordance with that, developing student active interaction and collaboration, a lecturer may implement the Problem-based Learning (PBL) model which is one alternative to develop students' soft skills. PBL is a learning model presenting contextual problems so that the problems stimulated the students to learn in teams to solve real-world problems (Ministry of Education: 2013). PBL will involve more processes of stimulating high cognitive levels and familiarizing students with critical thinking.

However, even when science and technology development has changed rapidly, the improvement of teaching and learning activities and quality of education still need to give more attention because the progress of education has broad implications for thinking human in various fields so that every young generation has to learn a lot to become a leader. The need of the future is those who possess not only the cognitive but also the psychomotor aspects of students.

This development brings radical changes that shift learning goals from the mastery of skills toward expertise with an awareness of nature and the rich differences of our global society (Puspawati et al., 2021; Trilling & Fadel, 2009). The people are called educated according to the needs of the times and it changed the mindset changes of Indonesian English teachers' education in the 2013 curriculum stated that English is related to how to systematically discover and understand the worldwide environment. English education is not just mastery of a foreign language in the form of facts, and understanding of concepts and principles but also a process of discovery based on the science of the language from the real world. Based on Permendikbud No. 65 of 2013 relating to process standards, it is stated that the learning objectives include the development of attitudes, knowledge and skills. English language stands as a vital part of the success to enter a global workforce, encompasses the three aspects of mind on, hands on and hearts on, or the ability to use the mind to construct concepts through direct experience accompanied by a scientific attitude (Kemendikbud, 2013) this situation made the need of The conventional teaching method where students are demanded to remember and recall information without being required to understand its relevance and application in everyday life (Munawaroh, 2020), is no longer compatible with the 21st century learners' needs.

The recent research on some students in first grade at private vocational schools In Makassar showed that there are several problems in the learning process i.e. the students are not participating enough so the learning value of the students is lower this has an impact on the learning outcomes of students who are relatively lower there only about 45% of them reached the KKM value caused by the ability of students is still limited to memorization and has difficulty facing questions that require analysis and understanding. The cause is no longer about the distance of teaching since the pandemic attack, but also the teacher's strategy to overcome the students' variety of needs. Therefore, the teacher as the mentor or the planner needs to find a suitable approach to assist with the learning requirements.

Pohan (2020) stated that Online learning is a technique of instruction that makes use of computer networks; there is no face-to-face interaction between the teacher and the pupils in this method. In response to a global problem, mainly the development of the Covid-19 virus, which mandates that everyone maintain a physical distance from one another, online education first became widely recognized to the general public in 2020. When online learning is implemented, many issues come up. All parties concerned, starting with the teachers, kids, and parents, are affected by this issue. One issue teachers encounter is the improper use of technology by some of their colleagues. It will be challenging for teachers who prefer to teach conventionally to implement technology-assisted learning.

Concerning to the facts above, it is necessary to apply a learning model that is able to overcome these problems, i.e. using problem-based learning or Problem-Based Learning (PBL). Regarding to this matter, the researchers initiatively wish to apply the PBL learning model. Using the Problem-Based Learning (PBL) learning model can determine students to think at a higher level. Students should try to learn to solve problems (problems) to develop skills, analysis, and process the information.

Developed firstly at the McMaster School of Medicine in Canada in 1965. Furthermore, it was refined by Howard in 1988 as a curriculum development strategy and a learning process approach (Jalinus et al., 2019; Mahasneh & Alwan, 2018; Samantha Wells & Jackson., 2009). The PBL learning model acts as teachers as a mover or guide, while students act as recipients or mentors. This interaction process will work well if students are more active than the teacher, conveying biology subject matter needs to be designed with an appropriate strategy, and students may get new experiences, the learning process is more enjoyable and creates interaction between students and students and teaching foreign language by using problem-based learning for students will make them active since the process of the learning force students to find the cases as well as their natural social interaction will show up immediately.

The learning model is an organized demonstration of course materials including before, during, and aspects after the teaching-learning process and all related facilities directly or used indirectly in the learning process (Uliyandari & Elly, 2020). Therefore, the variations in learning activities, by using problem-based learning models, learning is more active and not saturating, so that later it will

have a positive impact on student learning outcomes. Learning by using the PBL learning model emphasizes higher-order thinking. Students must try to learn in solving problems in developing the ability to analyze and process the case informed. According to Rosyidi (2018), PBL is a learning method that uses real-life problems as a context in which students learn critical thinking and problem-solving skills. In addition, Uliyandari M, et.al (2021) explain the improvement scores of students' after the PBL model implementation because this model positioned students as self-directed learners so students have a bigger role than lecturers in terms of the occurrence of knowledge construction in students. In addition, the PBL model purpose to study content, process skills, problem-solving, and also study problems in the real world (Khoriyah & Husamah) 2018).

Recently, students in this modern era have used technology in the form of smartphones and laptops that can connect to the internet; this can be used by teachers as supporting facilities for the learning process during the coronavirus pandemic that attacked Indonesia. Until now, it is not known how long the coronavirus can be overcome because the number of infected people is increasing, so online learning is the only solution that can be used to support sustainable educational activities at the future. The government recommendation has made out the activity of teaching to be 50% online and 50% offline, yet some organizations were still performed whole offline and whole offline with their terms and conditions, hence this research carried out to compare the activity yet also to assist the learning types instructed for making a better comprehension for student's need. Therefore, suitable approaches need to carry out. The implementation of this PBL model was designed in order to encourage students to become researchers, analytical, and innovative (Kassab et al., 2017). This model approach is hopefully could be beneficial since it prepares the students, and could assist them in the crisis era, therefore, the use of problems or social contexts as an initial unit of learning is characteristic of problem-based learning. In acquiring information and developing an understanding of topics, students learn how to construct a problem framework, organize and investigate problems, collect and analyze data, compile facts, construct arguments about problem-solving, and work individually or collaboratively on problem-solving (Rosyidi, 2021). PBL is the process of activating knowledge by presenting a problem in the real world and students trying to solve it. Students must solve complex and fundamental issues in life, all of which are used to motivate students to identify and discover concepts or principles in discussing a given problem.

METHODS

This research 'Analysis used a qualitative experimental approach. Qualitative research intends to understand the phenomena experienced by research subjects such as behavior, perceptions, motivations, actions, etc., holistically, and in a descriptive way in the form of words and language, at a form of special context that is natural and by utilizing various natural methods (Moleong 2016). Research of the qualitative variety is used during the epidemic era used to characterize online learning management, which included planning, organizing, implementing, and monitoring. Google Sites was used to distribute the course material during the online learning process to assist the use of PBL in learning.

The data collection method that used is pretest-posttest. The cognitive test was given to participants after the researcher had witnessed the educational session. The posttest scores are taken after the conclusion of learning in each class, but the value of learning outcomes.

The test administered to students as a means of determining their conceptual understanding and capacity for critical thought throughout the pretest and posttest sessions of this study. Students' abilities to interpret (interpretation), exhibit, classify, summarize, draw conclusions (inference), compare, and explain in accordance with the concept are utilized as indicators of their conceptual comprehension. The results of exams administered at the conclusion of the learning process, particularly for content on student's school field practice by provide evidence of the students' conceptual knowledge. Constructing knowledge requires critical thinking ability competencies. The indicators of critical thinking ability are, (a) analysis ability, (b) synthesis ability, (c) recognition and problem-solving ability, (d) conclusion ability, (e) evaluation ability or judge (Istiqamah, 2019). But at this research, there would be two variants taken, those are, The 1) critical thinking ability and 2) understanding the concept. The combination was taken from the rest points mentioned and made after considering the functional use of this research.

The data were analysed using descriptive statistical analysis about the use of online Problem-Based Learning (PBL) as the learning model regarding the student's conceptual understanding and critical thinking at school field practice. Based on the theory developed by Shoimin (2014) explains the characteristics of Problem Based Learning, namely: 1. Learning is student-centered, 2. Authentic problems from the organizing focus for learning. 3. The problem presented to students is authentic so that students can easily understand the problem and can apply it in their professional life later, 4. New information is

acquired through self-directed learning, and 5. New information is acquired through self-directed learning would be given.

The sample at this research is the students of second grade at SMKN 2 Makassar Vocational School. Taking the first semester students who were entering the late adolescent phase were was a critical or transition period for the development of thinking ability (cognitive). This sample also purposively selected due to the school field practice phase which is need to be assist in developing their perspective about working life critically. In line with the result of Wynn Sr et al. (2014) that the suitable provided learning model that stimulates a thinking model with issues, situations, and problem-solving dialogues as contained in the PBL model features will be adequate. In this PBL paradigm, the lecturer serves as a facilitator to give students a space where they can participate more actively in their learning. Wynn Sr et al. (2014) emphasized that the PBL model's active learning environment encourages student participation and collaboration since PBL calls for students to be active both in thinking and in communicating the consequences of their thinking.

RESULTS AND DISCUSSION

Based on the results of this research analysis, the differences in the learning models used as a whole indicate that the use of online PBL learning model to assist students in school field practice regarding to their concept understanding and critical thinking made a significant change. The online activity, which was carried out by using Google sites showed positive improvement. The quality of education is raised by the usage of learning management. Students are more likely to attend meetings while learning online with Google Sites, and when adopting this approach, understanding about the concept of the topic and goals at their school field practice were more manging, they were also more likely to participate actively in class discussions.

Overall, study demonstrated that using the PBL learning approach makes a significant improvement, there is an increase in students' concept understanding and critical thinking of their activity at school field practice even if it took in online medium. The Inferential statistical analysis was performed to analyse the research data. Based on the SPSS results, the results of testing the hypothesis using the N-gain independent sample t-test obtained a result of 0.000. So, it can be concluded that in this study there is a slightly effectiveness of PBL online learning to the improvement of concept understanding and critical thinking. In addition, students can fulfil the KKM and learning objectives to the fullest. Rahmat and Krisnadi (2020) also stated this, in their research saying that online learning applied to students at SMK Negeri 8 Tangerang is quite effective and directly proportional to the understanding of students who do not understand online learning given by teachers through online learning.

The learning outcomes of second grader at SMKN 2 Makassar related to the use of PBL through the students' online school field practice made a breakthrough because it showed slightly improvement score in pretest and posttest. The percentage of the student's concept understanding and critical thinking at the pretest and posttest were steeply improved. So, it can be concluded that there is a significant effectiveness related with the improvement of Problem Based Learning (PBL) learning at the school during field practice which affected not only the cognitive but also the psych motoric aspects may be applied in classroom to assist student's independency and critical attitude.

Supporting the data, the interview found impressing facts that students felt there were some distinctions the approach implemented. Previously, students learnt individually and then the activity guided them to be more social and learn to discuss naturally. During the observation after test held, the students were actively contributed to the discussion than used to. They looked busy by sharing ideas with the team regarding to the case at their field practice given. The school field practice which was held half semester made out 50% online, hence there few information also gathered from online observation saying that their discussion with the teacher and field practice senior running well because the instruction clear and the students got clear set of procedure on each activity. Rahayu (2019) said that the use of contextual problems through problem-based learning activities to help students find concepts had a positive influence on learning outcomes. Eventually, the implementation indicated that some students made a positive attitude as well as better scoring that previous type of teaching approach said the teacher during the observation.

In fact, the students who were involving in School Field Practice reported that both activities, online and offline made a similar outcome to the improvement of their skill comprehension toward the material. Bahri, Putriana, & Idris (2018) stated that, the use of PBL approach had also facilitated well since their tutor from school assist them with informative instruction on each activity. PBL can train and improve students' analytical skills. It communicates and cooperate, as well as enables the students to deal with different issue from different angles. Yet, the result of the learning process also proved that students are

successful at handling and managing problem-solving in real life since they have been given the opportunity to practice and present it directly. Although spoken communication in activities involving presentations is not ideal owing to a lack of confidence, the goal of involving students to be actively in charge had been successfully attained. This was made possible by the group formation in school field practice. The results of the average pretest and posttest scores of students and N gain score for conceptual understanding and critical thinking ability of students are shown in Table 1, Table 2, and Figure 1 below.

Table 1. Score Gain for each group of students on the conceptual understanding test.

Interpretation	Frequency	Gain Value	Significant t-test
High	6	$g > 0.7$	0.000
Medium	29	$0.7 > g > 0.3$	
Low	0	$g < 0.3$	

Table 2. Score Gain for each group of students on the concept critical thinking test.

Interpretation	Frequency	Gain Value	Significant t-test
High	2	$g > 0.7$	0.000
Medium	33	$0.7 > g > 0.3$	
Low	0	$g < 0.3$	

following research, the data revealed that the average scores of the pretest and posttest on the conceptual understanding test were 68 and 87, and the students' pretest and posttest average scores for critical thinking ability test were 67 and 87. The data indicated that there are differences between the pretest and posttest scores of the students. In order to assess whether the students' conceptual understanding and critical thinking skills have improved, the gain test was used to calculate the differences between the pretest and posttest scores of the students as shown in tables 2 and 3. Based on tables 1 and 2, it is shown each class group for conceptual understanding in the high, medium, and low classes were 6; 29; and 0 in the "medium" category. Meanwhile, the students' critical thinking ability also have an improvement which shows by the N-gain score of each group, where the N-gain score for high, medium, and low classes is 2, 33, and 0 which are in the "medium" category while the significance value is 0.000.

The improvement in student performance following the application of the PBL model is linked to the model's focusing of students as self-directed learners, which gives them a greater influence over lecturers in terms of the occurrence of knowledge production in students. The PBL approach is likewise based on real-world issues (Bakri & Supriadi, 2017) the PBL model purpose to study content, process skills, problem-solving, and also study problems in the real world (Khoriyah & Husamah) 2018). Additionally, the use of the PBL model learning offers challenges under real-world conditions to encourage students to think critically and absorb the material by heart as well as analyze the issue.

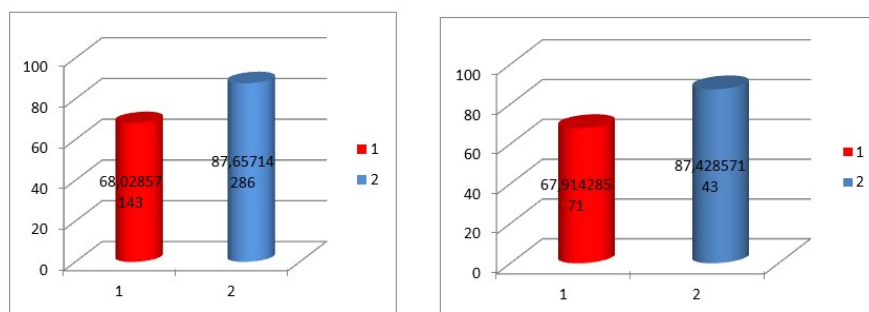


Figure 1. *The Student's Pretest and Posttest in the Use Of Online PBL for Concept Understanding and Critical Thinking During School Field Practice*

CONCLUSION

Referring to the results of research and discussion, it can be concluded through the application of the Problem-Based Learning (PBL) learning model at online school field practice, as learning from home for half semester had an influence on student learning outcomes. Where there is an increase in the learning outcomes of students of class XI of SMKN Negeri 2 Makassar in the English class, specifically to their personality being critical and independently understanding the concept given by the implementation of Problem-based learning (PBL). It was also seen that, by these two characteristics of PBL, students were steadier in managing their activity in relation to their presentation at the school field practice. In short, it could be a recommendation for further researchers to apply a blended problem-based learning implementation since that will be applied to all institution

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